

In The Claims:

The claims are as follows:

1. – 16. (Cancelled)

17. (Previously presented) A method of guiding a sleep pattern of a sleeper, the method comprising:

monitoring at least one physiological characteristic of a sleeper indicative of a current sleep stage of the sleeper;

generating a sensory stimulus to lead the sleeper to a sleep stage different from the current sleep stage; and

calibrating to the sleeper's sleep pattern by monitoring the physiological characteristic of the sleeper for at least one full sleep cycle prior to generating the sensory stimulus.

18. (Original) The method of claim 17, wherein calibrating to the sleeper's sleep pattern further comprises determining at least one physiological characteristic indicative of when the sleeper is changing from one sleep stage to another sleep stage.

19. – 24. (Cancelled)

25. (Previously presented) A method of guiding a sleep pattern of a sleeper, the method comprising:

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monitoring at least one physiological characteristic of a sleeper indicative of a current sleep stage of the sleeper;

generating a sensory stimulus to lead the sleeper to a sleep stage different from the current sleep stage; and

establishing a personalized sleeper profile including at least one data reference indicating a sensory stimulus setting for the sleeper and referencing that data reference when generating the sensory stimulus to lead the sleeper.

26. – 30 (Cancelled)

31. (Previously presented) A method of guiding a sleep pattern of a sleeper, the method comprising:

monitoring at least one physiological characteristic of a sleeper indicative of a current sleep stage of the sleeper; and

generating a sensory stimulus to lead the sleeper to a sleep stage different from the current sleep stage, wherein the at least one physiological characteristic monitored is indicative of a sleep stage associated with sleep apnea of the sleeper and the sensory stimulus generated is generated to lead the sleeper to a sleep stage not associated with the sleeper's sleep apnea.

32. (Previously presented) A method of guiding a sleep pattern of a sleeper, the method comprising:

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monitoring at least one physiological characteristic of a sleeper indicative of a current sleep stage of the sleeper; and

generating a sensory stimulus to lead the sleeper to a sleep stage different from the current sleep stage, wherein the at least one physiological characteristic monitored is indicative of a sleep stage associated with sleepwalking by the sleeper and the sensory stimulus generated is generated to lead the sleeper to a sleep stage not associated with the sleeper's sleepwalking.

33. (Previously presented) A method of guiding a sleep pattern of a sleeper, the method comprising:

monitoring at least one physiological characteristic of a sleeper indicative of a current sleep stage of the sleeper; and

generating a sensory stimulus to lead the sleeper to a sleep stage different from the current sleep stage, wherein the at least one physiological characteristic monitored is indicative of a sleep stage associated with bedwetting by the sleeper and the sensory stimulus generated is generated to lead the sleeper to a sleep stage not associated with the sleeper's bedwetting.

34. (Previously presented) A method of guiding a sleep pattern of a sleeper, the method comprising:

monitoring at least one physiological characteristic of a sleeper indicative of a current sleep stage of the sleeper; and

generating a sensory stimulus to lead the sleeper to a sleep stage different from the current sleep stage, wherein the at least one physiological characteristic monitored is indicative

of a sleep stage associated with nightmares of the sleeper and the sensory stimulus generated is generated to lead the sleeper to a sleep stage not associated with the sleeper's nightmare.

35. – 42. (Cancelled)

43. (Previously presented) A method of guiding a sleep pattern of a sleeper between NREM and REM sleep, the method comprising:

- monitoring at least one physiological characteristic of the sleeper indicative of NREM sleep;

- generating a sensory stimulus having at least one characteristic configured to lead the sleeper to enter REM sleep;

- monitoring the physiological characteristic to determine whether the sensory stimulus was effective to lead the sleeper to enter REM sleep; and

- establishing a personalized sleeper profile including at least one data reference indicating a sensory stimulus setting for the sleeper and referencing that data reference when generating the sensory stimulus to lead the sleeper.

44. – 57. (Cancelled)

58. (Previously presented) A sleep pattern adjustor comprising:

- a physiological characteristic monitor;

- a sensory stimulus generator; and

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a processor operatively associated with the physiological characteristic monitor and the sensory stimulus generator, the processor configured to receive input from the physiological characteristic monitor indicative of a first sleep stage of a sleeper and provide output to the sensory stimulus generator to cause the sensory stimulus generator to generate at least a first sensory stimulus in response to the input received from the physiological characteristic monitor to lead the sleeper from the first sleep stage to a second sleep stage, wherein the processor is further configured to calibrate to the sleeper's sleep pattern by monitoring at least one physiological characteristic of the sleeper for at least a portion of a sleep cycle prior to the sensory stimulus generator generating sensory stimuli.

59. (Original) The sleep pattern adjustor of claim 58, wherein the processor is further configured to calibrate to the sleeper's sleep pattern by determining at least one physiological characteristic indicative of when the sleeper is changing between sleep stages.

60. – 66. (Cancelled)

67. (Previously presented) A sleep pattern adjustor comprising:

- a physiological characteristic monitor;
- a sensory stimulus generator; and
- a processor operatively associated with the physiological characteristic monitor and the sensory stimulus generator, the processor configured to receive input from the physiological characteristic monitor indicative of a first sleep stage of a sleeper and provide output to the

sensory stimulus generator to cause the sensory stimulus generator to generate at least a first sensory stimulus in response to the input received from the physiological characteristic monitor to lead the sleeper from the first sleep stage to a second sleep stage, wherein the processor is further configured to reference a personalized sleeper profile for the sleeper and generate sensory stimulus in accordance with the sleeper's personalized sleeper profile.

68. – 72. (Cancelled)

73. (Previously presented) A sleep pattern adjustor comprising:

a physiological characteristic monitor;

a sensory stimulus generator; and

a processor operatively associated with the physiological characteristic monitor and the sensory stimulus generator, the processor configured to receive input from the physiological characteristic monitor indicative of a first sleep stage of a sleeper and provide output to the sensory stimulus generator to cause the sensory stimulus generator to generate at least a first sensory stimulus in response to the input received from the physiological characteristic monitor to lead the sleeper from the first sleep stage to a second sleep stage, wherein the processor is configured to receive input indicative of a sleep stage associated with the sleeper experiencing sleep apnea and provide output to generate sensory stimulus in response to the input received to lead the sleeper to a different sleep stage not associated with the sleeper experiencing sleep apnea.

74. (Previously presented) A sleep pattern adjustor comprising:

a physiological characteristic monitor;

a sensory stimulus generator; and

a processor operatively associated with the physiological characteristic monitor and the sensory stimulus generator, the processor configured to receive input from the physiological characteristic monitor indicative of a first sleep stage of a sleeper and provide output to the sensory stimulus generator to cause the sensory stimulus generator to generate at least a first sensory stimulus in response to the input received from the physiological characteristic monitor to lead the sleeper from the first sleep stage to a second sleep stage, wherein the processor is configured to receive input indicative of a sleep stage associated with the sleeper sleepwalking and provide output to generate sensory stimulus in response to the input received to lead the sleeper to a different sleep stage not associated with the sleeper sleepwalking.

75. (Previously presented) A sleep pattern adjustor comprising:

a physiological characteristic monitor;

a sensory stimulus generator; and

a processor operatively associated with the physiological characteristic monitor and the sensory stimulus generator, the processor configured to receive input from the physiological characteristic monitor indicative of a first sleep stage of a sleeper and provide output to the sensory stimulus generator to cause the sensory stimulus generator to generate at least a first sensory stimulus in response to the input received from the physiological characteristic monitor to lead the sleeper from the first sleep stage to a second sleep stage, wherein the processor is

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configured to receive input indicative of a sleep stage associated with the sleeper wetting the bed and provide output to generate sensory stimulus in response to the input received to lead the sleeper to a different sleep stage not associated with the sleeper wetting the bed.

76. (Previously presented) A sleep pattern adjustor comprising:

a physiological characteristic monitor;

a sensory stimulus generator; and

a processor operatively associated with the physiological characteristic monitor and the sensory stimulus generator, the processor configured to receive input from the physiological characteristic monitor indicative of a first sleep stage of a sleeper and provide output to the sensory stimulus generator to cause the sensory stimulus generator to generate at least a first sensory stimulus in response to the input received from the physiological characteristic monitor to lead the sleeper from the first sleep stage to a second sleep stage, wherein the processor is configured to receive input indicative of a sleep stage associated with the sleeper having a nightmare and provide output to generate sensory stimulus in response to the input received to lead the sleeper to a different sleep stage not associated with the sleeper having a nightmare.

77. (Cancelled)

78. (Cancelled)

79. (Previously presented) A sleep pattern adjustor comprising:

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a physiological characteristic monitor;

a sensory stimulus generator; and

a processor operatively associated with the physiological characteristic monitor and the sensory stimulus generator, the processor configured to receive input from the physiological characteristic monitor indicative of a first sleep stage of a sleeper and provide output to the sensory stimulus generator to cause the sensory stimulus generator to generate at least a first sensory stimulus in response to the input received from the physiological characteristic monitor to lead the sleeper from the first sleep stage to a second sleep stage, wherein the processor is configured to store a personalized sleep profile and generate the sensory stimulus in accordance with data from the personalized sleep profile.

80. (Original) The sleep pattern adjuster of claim 79, wherein the personalized sleep profile comprises data indicative of the sleeper's sleep stages and data indicative of the stimuli to which the sleeper responds for pacing and leading the sleeper from the first sleep stage to the second sleep stage.

81. – 83. (Cancelled)

84. (Previously presented) An apparatus for guiding a sleep pattern of a sleeper to change between NREM and REM sleep, the apparatus comprising:

a physiological characteristic monitor configured to monitor at least one physiological characteristic of a sleeper;

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a sensory stimulus generator configured to generate at least one sensory stimulus in response to the physiological characteristic of the sleeper; and

a processor operatively associated with the physiological characteristic monitor and the sensory stimulus generator, the processor configured to receive input from the physiological characteristic monitor indicative of a NREM sleep stage, and provide output to the sensory stimulus generator to lead the sleeper to change to a REM sleep stage, wherein the processor is further configured to calibrate to the sleeper's sleep patterns and to calculate an optimal sleep pattern related to an amount of time remaining in a preselected sleep period duration.

85. (Original) The apparatus of claim 84, wherein the processor is further configured to guide the sleeper through the optimal sleep pattern by causing the sensory stimulus generator to generate the at least one sensory stimulus responsive to the physiological characteristic of the sleeper to pace the sleeper, adjusting at least one characteristic of the sensory stimulus generated to lead the sleeper, and determine whether the sleeper is following the lead by monitoring the physiological characteristic of the sleeper through the physiological characteristic monitor.

86. (Previously presented) An apparatus for guiding a sleep pattern of a sleeper to change between NREM and REM sleep, the apparatus comprising:

a physiological characteristic monitor configured to monitor at least one physiological characteristic of a sleeper;

a sensory stimulus generator configured to generate at least one sensory stimulus in response to the physiological characteristic of the sleeper; and

a processor operatively associated with the physiological characteristic monitor and the sensory stimulus generator, the processor configured to receive input from the physiological characteristic monitor indicative of a NREM sleep stage, and provide output to the sensory stimulus generator to lead the sleeper to change to a REM sleep stage, wherein the processor is further configured to reference a personalized sleeper profile for the sleeper and the sensory stimulus generator is configured to generate sensory stimulus in accordance with the sleeper's personalized sleeper profile.

87. (Cancelled)

88. (Cancelled)